
A New Species of *Gibsoniothamnus* (Schlegeliaceae) from Costa Rica and Panama

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ABSTRACT. A new species, *Gibsoniothamnus parvifolius*, is described based on disjunct populations from Costa Rica and western Panama. The species is distinguished by its relatively small, acuminate leaves, few-flowered inflorescences, and its relatively small, purplish flowers borne on short pedicels.

***Gibsoniothamnus parvifolius* Barringer, sp. nov.**

TYPE: Panama. Chiriquí: NE del campamento Fortuna, 1000–1200 m, 15 Aug. 1976, M. Correa, R. Dressler & Garibaldi 2500 (holotype, MO; isotypes, NY, PMA). Figure 1.

A *Gibsoniothamno epiphytico* foliis minoribus anguste lanceolatis vel ovato-lanceolatis acuminatis coriaceis, floribus solitariis vel geminatis differt.

Epiphytic shrub or small epiphytic tree to 4 m tall; young branches glabrous to sparsely pubescent, terete to slightly angled; older stems with gray-brown bark and persistent raised petiole bases. Leaves opposite, anisophyllous; larger leaves with petioles 3–7 mm long, the lamina narrowly lanceolate to obovate-lanceolate, 3–5.5 cm long, 1.0–1.8 cm wide, coriaceous, glabrous or rarely pubescent, gland-dotted, the base cuneate, the apex acuminate to long-acuminate, the veins immersed above, prominent and often reddish below, 2 or 3 secondary veins per side, the upper surface dark green, shiny, the lower surface light green, dull, domatia present in the axils of the secondary veins; smaller leaves with petioles 2–5 mm long, the lamina ovate-lanceolate, 1.6–2.2 cm long, 0.6–1.4 cm wide, coriaceous, glabrous or rarely pubescent, gland-dotted, the base rounded to acute, the apex rounded to obtuse, rarely acuminate, the veins impressed above, prominent and sometimes reddish below, 1–2 secondary veins per side. Flowers axillary, solitary or in pairs; pedicels 1.5–2.0 cm long, sparsely pubescent with glandular trichomes, slightly thickened above, bracteolate at base, the bracteoles linear, to 1 mm long; calyx campanulate, purple to red-purple, the tube 3–4 mm long, with 5 lobe-like enations that develop from the side of the calyx tube, the enations 8–9 mm long, 1 mm wide, narrowly triangular, slightly winged, glabrous,

spreading; corolla cylindric, reddish violet to purple or lilac, 1.5–2.0 cm long, 3 mm diam., the upper lobes broadly ovate, 1.5–2.0 mm long, 2.0–2.5 mm wide, the lateral lobes ovate, 1.5–2.0 mm long, 1.5–2.0 mm wide, the median lobe ovate, 1.5–2.0 mm long, 2.0–2.5 mm wide, the lobes generally more darkly colored than the tube; stamens 4, attached about 5 mm above the base of the corolla tube, with a ring of trichomes at the level of attachment, the filaments 12–16 mm long, filiform, curved above, slightly thickened at the base; staminode 1.7–5.0 mm long; pistil glabrous, ovary globose, 1 mm tall, glandular at the base, the style elongate, 15–18 mm long, the stigma clavate to capitate. Berry globose, to 1 cm diam., green turning white, with 5–10(–20) seeds, the seeds fusiform, 2.0–2.5 mm long 1.0–1.4 mm wide, with a loose, hyaline, reticulate seedcoat.

This species is distinguished by its small leaves, slightly winged calyx with narrowly triangular enations, and few-flowered inflorescence. It is found growing on the volcanic mountains of Costa Rica and western Panama in two disjunct populations. The northern Costa Rican plants grow between 300 and 700 m, while the southern Costa Rican and Panamanian plants grow between 1000 and 1300 m elevation. The two populations differ slightly and may eventually prove to be distinct species. The northern plants tend to have terete, not angled, branches and smaller staminodes, less than 3 mm long. The distribution of the northern populations overlaps slightly with that of *Gibsoniothamnus epiphyticus* (Standley) L. O. Williams, native to central Costa Rica, and the southern populations.

This species is sometimes confused with *Gibsoniothamnus epiphyticus*, but the new species differs by its smaller, narrowly lanceolate, acuminate, coriaceous leaves, and 1- or 2-flowered inflorescence. In contrast, *G. epiphyticus* has elliptic, subcoriaceous leaves, 5.5–7.5 cm long, and flowers in condensed, paniculate inflorescences. The new species is also confused with *G. alatus* A. Gentry, but that species has large calyx wings, usually extending more than 4 mm, leaves 4–9 cm long, and white flowers. Many of the specimens of *G. parvifolius* are

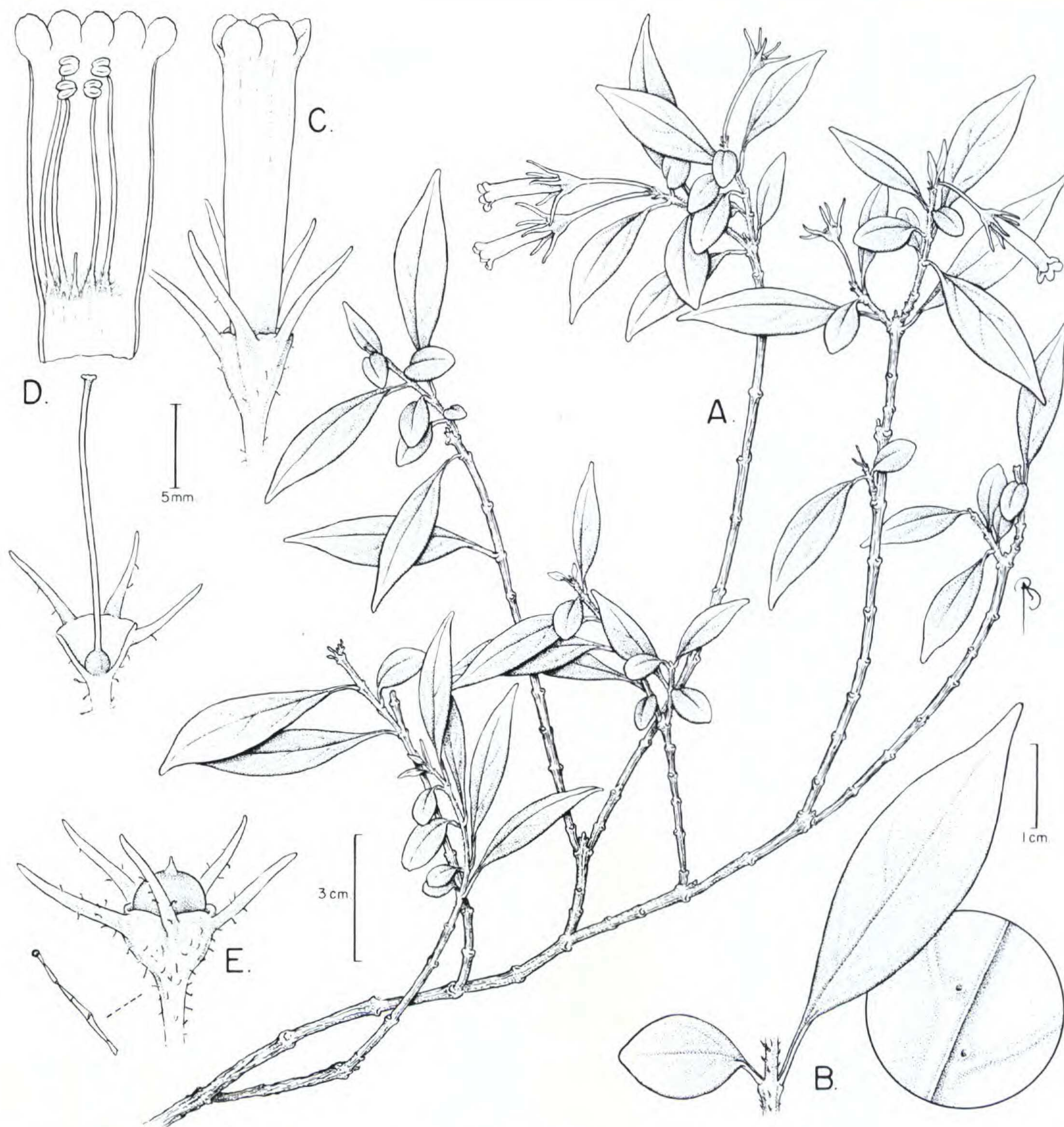


Figure 1. *Gibsoniothamnus parvifolius* Barringer. —A. Plant habit. —B. Unequal leaves at a node. —C. Flower habit. —D. Flower dissected; note the staminode and the enations on the calyx. —E. Fruit with detail of trichome.

tentatively identified as *G. pterocalyx* A. Gentry. That species has leaves that are acute and not as thick as those in *G. parvifolius*, the larger leaves at a node have petioles 1.0–1.3 cm long, the calyces are green, and the flowers are usually borne in condensed panicles.

D'Arcy (1979) included three specimens of this species under *G. alatus*, noting that they probably represented a distinct species.

Paratypes. Costa Rica. **Alajuela:** along road between Cañas and Upala, 8 km N of Bijagua, 300 m, 26 June 1976, *Croat 36505* (MO); Reserva Biológica Monteverde, Valle del Río Peñas Blancas 10°20'N, 84°43'W, 900 m,

28 Apr. 1987, *Haber & Cruz 7006* (CR, F, MO); Upala, Dos Ríos, 5 km al sur de Brasilia, margen derecha de Río Pizote, 10°55'N, 85°20'W, 500 m, 30 Oct. 1987, *Herrera 1015* (CR, F, MO); Upala, Colonia Libertad, 2 km NE, cuenca del Río Cucaracho, 450 m, 6 May 1988, *Herrera 1980* (CR, F, MO); Upala, Bijagua, El Pilón, 10°43'30"N, 85°00'30"W, 600 m, 12 July 1988, *Herrera 2071* (MO); Upala, Bijagua, El Pilón, camino a Chimurria 10°43'45"N, 84°59'58"W, 500–600 m, 20 July 1988, *Herrera 2131* (CR, F, MO); approx. 8 km N of Río Naranjo on the Cañas–Upala road, 2 km N of Bijagua, 400–500 m, 21 Sep. 1975, *Uiley & Uiley 3161* (DUKE, F, MO). **Guana-**
caste: 6 km N of village of Río Chiquito, slope above Lake Arenal, 600–700 m, 10°25'N, 84°46'W, 8 May 1986, *Haber ex Bello et al. 4831* (MO); 6 km NE of Río Chiquito village, next to Lake Arenal, 10°27'N, 84°48'W,

600 m, 8 May 1988, *Haber ex Bello et al.* 4789 (MO); Parque Rincón de la Vieja, Hacienda Santa María, 10°48'N, 85°19'W, 800–850 m, *Herrera* 672 (MO); beside creek in pasture 3 km N of Río Naranjo, W of Tenorio Volcano, 550 m, 3 June 1972, *Lent* 2559 (F); Los Ayotes, near Tilerán, 600–700 m, 21 Jan. 1926, *Standley & Valerio* 45610 (US). PANAMA. **Bocas del Toro:** between Quebrada Higuaron and Gutierrez, 18 Apr. 1968, *Kirkbride & Duke* 754 (MO, NY); Fortuna Dam region, 8°45'N, 82°15'W, 1000 m, 8 Dec. 1985, *McPherson* 7869 (MO, NY). **Chiriquí:** vicinity of Gualaca, 8.6 mi. from Planes de Hornito, La Fortuna, 4000 ft., 9 July 1980, *Antonio* 5015 (MO); NE del Campamento Fortuna, Finca Pittí, 1000–1200 m, 16 Aug. 1976, *Correa et al.* 2525 (F, NY); NO del campamento Fortuna, 8°45'N, 82°15'W, 1000–1200 m, 23 Sep. 1976, *Correa et al.* 2571 (MO, NY, PMA); along road between Gualaca and Fortuna Dam site, 10.1 mi. NW of Los Planes de Hornito, 1300 m, 82°17'W, 8°45'N, 8 Apr. 1980, *Croat* 49815 (MO); 9 mi. from Río Chiriquí Viejo bridge near Nueva California on road to Río Sereno, 7 Apr. 1979, *Hammel et al.* 6833 (MO); road

over Fortuna Dam, N of lake, 8°45'N, 82°15'W, 1110–1150 m, 27 Oct. 1985, *McPherson* 7400 (MO); Fortuna, Potero de Pittier, 22 Feb. 1976, *Mendoza* 794 (F); Fortuna Dam area, slope NW of confluence of Río Hornito and Río Chiriquí, 8°44'N, 82°13'W, 1050–1100 m, 11 Nov. 1980, *Sytsma & Stevens* 2267 (MO).

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Literature Cited

- D'Arcy, W. G. 1979. Scrophulariaceae. In R. E. Woodson & Shery, Flora of Panama. Ann. Missouri Bot. Gard. 66: 173–274. [*Gibsoniothamnus* pp. 220–227.]